### **IEEE P802.11 Wireless LANs**

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| PDT AMP Downlink PPDU Format | | |
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**Introduction**

This document provides proposed draft text for IEEE 802.11bp draft.

The following Motions apply to this PDT:

* **PM-5**: IEEE 802.11bp will specify, in 2.4 GHz, an AMP Downlink PPDU containing at least an 802.11 preamble field, an AMP-Sync field and an AMP-Data field. Inclusion of an AMP-SIG field is TBD.
  + The details of the 802.11 preamble field are TBD.
  + Additionally, for transmission to backscatter STAs there will be one or more Excitation fields
  + Additionally, for transmission to backscatter STAs there may be more than one AMP-Data field
    - Additionally, AMP-Sync and AMP-SIG field may precede each AMP-Data field
  + Name of this Downlink PPDU is TBD.

[Motion #8, [1] and [7]]

* **PM-38**: 11bp defines two PPDU variants of the AMP DL PPDU for backscattering operation in 2.4GHz.
  + PPDU subtype 1 consists of the 802.11bp preamble, an Excitation field, an AMP SYNC field, and an AMP Data field and an Excitation field

https://www.ieee802.org/11/email/stds-802-11-tgbp/pngTI16YYYUYn.png

* + PPDU subtype 2 consists of the 802.11bp preamble, an AMP SYNC field, and an AMP Data field and an Excitation field.

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* [Motion #88, [1] and [90]]

***TGbp editor: Please add the following subclause 40.3.2.1:***

**40.3.2.1 DL AMP PPDU formats**

There are three AMP Downlink PPDU Formats: *NAMETBP1*, *NAMETBD2*, and *NAMETBD3*. The *NAMETBD1* is transmitted to a non-backscatter STA. The *NAMETBD2* is transmitted to a backscatter STA. The *NAMETBD3* is transmitted to a backscatter STA.

Figure 40-X1 shows the *NAMETBD1* format, Figure 40-X2 shows the *NAMETBD2* format, and Figure 40-X3 shows the *NAMETBD3* format.

**Figure 40-X1 – *NAMETBD1* format**



**Figure 40-X2 – *NAMETBD2* format**



**Figure 40-X3 – *NAMETBD3* format**



The fields of the AMP Downlink PPDU formats are summarized in Table 40-Y1.

**Table 40-Y1 – Fields of the AMP Downlink PPDUs**

|  |  |
| --- | --- |
| **Field** | **Description** |
| L-STF | Non-HT Short Training field (see 40.3.8.2.1) |
| L-LTF | Non-HT Long Training field (see 40.3.8.2.1) |
| L-SIG | Non-HT SIGNAL field (see 40.3.8.2.1) |
| RL-SIG | Repeated Non-HT SIGNAL field (see 40.3.8.2.1) |
| U-SIG | Universal SIGNAL field (see 40.3.8.2.1) |
| AMP-Excitation | AMP Excitation (see TBD) |
| AMP-Sync | AMP Downlink Synchronization field (see 40.3.8.2.2) |
| AMP-SIG (TBD) | AMP SIG (see TBD) |
| AMP-Data | AMP Downlink Data field carrying the PSDU (see 40.3.9) |